PATENT COOPERATION TREATY



From the INTERNATIONAL SEARCHING AUTHORITY

RIDOUT & MAYBEE LLP. 1 City Centre Drive, Suite 308 Mississauga, Ontario L5B 1M2

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

Mississauga, Officatio DDD IM2	'
CANADA	(PCT Rule 44.1)
· .	,
·	·
	Date of mailing (day/month/year)
	27/04/2004
Applicant's or agent's file reference	
42370-0002	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No.	International filing date
PCT/CA 03/02031	(day/month/year) 30/12/2003
Applicant	
•	•
CONNERS, James M.	
1. $\boxed{\mathrm{X}}$ The applicant is hereby notified that the International Search	h Report has been established and is transmitted herewith.
Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claim	ns of the International Application (see Rule 46):
When? The time limit for filing such amendments is norma international Search Report; however, for more de	
Where? Directly to the International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Fascimile No.: (41–22) 740.14.35	· · · · · · · · · · · · · · · · · · ·
For more detailed instructions, see the notes on the acco	mpanying sheet.
The applicant is hereby notified that no International Search Article 17(2)(a) to that effect is transmitted herewith.	n Report will be established and that the declaration under
3. With regard to the protest against payment of (an) addition	
the protest together with the decision thereon has been applicant's request to forward the texts of both the pro-	n transmitted to the International Bureau together with the test and the decision thereon to the designated Offices.
no decision has been made yet on the protest; the app	olicant will be notified as soon as a decision is made.
4. Further action(s): The applicant is reminded of the following:	
Shortly after 18 months from the priority date, the international ap If the applicant wishes to avoid or postpone publication, a notice priority claim, must reach the International Bureau as provided completion of the technical preparations for international publica	of withdrawal of the international application, or of the in Rules 90 <i>bis</i> .1 and 90 <i>bis</i> .3, respectively, before the
Within 19 months from the priority date, a demand for internation, wishes to postpone the entry into the national phase until 30 mo	al preliminary examination must be filed if the applicant in the priority date (in some Offices even later).
Within 20 months from the priority date, the applicant must perfor before all designated Offices which have not been elected in the priority date or could not be elected because they are not bound	e demand or in a later election within 19 months from the

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016

Jean-Marc Fernandez

Authorized officer

INTERNATIONAL SEARCH REPORT

International Application No PCT/CA 03/02031

A. CLASSIFICATION OF SUBJECT FO1C1/20

F01C11/Q0

F01C1/08

F01C19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 - F01C - F04C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUM	ENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
χ	DE 25 50 360 A (ENGLAND WILL CLARKE) 12 May 1977 (1977-05-12)	1-10,12
A	figures 7,13-15,22,27,30 page 18, paragraph 2 page 20, paragraphs 2,3	11
X	US 3 724 427 A (SAUDER K) 3 April 1973 (1973-04-03)	1,2,4-6, 10,12,13
Y	figures 3,9,10 column 4, line 24 - column 5, line 25 column 7, line 35 - column 8, line 36	16-19
Х	US 3 989 011 A (TAKAHASHI MINORU) 2 November 1976 (1976-11-02) figures 1-5	1-6,10, 12
	column 2, line 37 - column 4, line 11 column 4, line 25 - line 41 column 5, line 11 - line 30	
	-/	

Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
 Special categories of cited documents: A* document defining the general state of the art which is not considered to be of particular relevance E* earlier document but published on or after the international filing date L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) O* document referring to an oral disclosure, use, exhibition or other means P* document published prior to the international filing date but later than the priority date claimed 	 'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention 'X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone 'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. '&' document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
21 April 2004	27/04/2004
Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Lequeux, F

INTERNATIONAL SEARCH REPORT

International Application No
PCT/CA 03/02031

C.(Continue	ation) DOCUMENTS SIDERED TO BE RELEVANT .	C1/CA U3/U2U31			
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.			
Х	GB 1 392 190 A (ROLLS ROYCE) 30 April 1975 (1975-04-30) the whole document	1-6			
X .	US 3 782 110 A (KOBAYASHI A) 1 January 1974 (1974-01-01) figures 1,8a,8b,9a,9b column 5, line 58 - line 62 column 7, line 19 - column 8, line 62	1,2,4-6, 10,12			
х	AT 311 178 B (MEZOEGAZ GEPGYAR SZOLGALT	14,15			
Υ	VALL) 12 November 1973 (1973-11-12) figures 1,2 page 2, line 1 - line 9 page 3, line 5 - line 20	16-19			
Х	DE 23 21 639 A (DRAEGER GEORG) 7 November 1974 (1974-11-07) figure 2 page 2, paragraph 4	14,15			
х	US 5 032 068 A (KURHERR WALDEMAR H) 16 July 1991 (1991-07-16) figure 1 column 4, line 59 - column 5, line 12	14,20			
A	US 2002/014069 A1 (HOLTZAPPLE MARK T ET 3,7-11 AL) 7 February 2002 (2002-02-07) Similar to cited document US6530211 but published earlier figures 1,2 paragraphs '0067! - '0070! paragraphs '0125! - '0129!				
					
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These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international pollication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been its filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

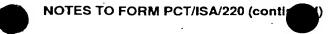
What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.



The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed:
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- 1. [Where originally there were 48 claims and after amendment of some claims there are 51]: "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]: "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
 "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
 "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.



PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	(Form PCT/ISA/	of Transmittal of International Search Report 220) as well as, where applicable, item 5 below.
42370-0002	ACTION	
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
PCT/CA 03/02031	30/12/2003	09/01/2003
· Applicant		
	•	
CONNERS, James M.		
according to Article 18. A copy is being tr		thority and is transmitted to the applicant
· ·	s of a total of4 sheets. • a copy of each prior art document cited in this	s report
in the disc decompanied by	a copy of each prior are accument of calling in	o report.
Basis of the report		
	international search was carried out on the balless otherwise indicated under this item.	asis of the international application in the
the international search v Authority (Rule 23.1(b)).	vas carried out on the basis of a translation of	the international application furnished to this
was carried out on the basis of th	e sequence listing:	nternational application, the international search
<u></u>	onal application in written form.	
	ernational application in computer readable for	m.
	this Authority in written form.	
	this Authority in computer readble form.	
the statement that the sul international application a	osequently furnished written sequence listing out it is the second is filed has been furnished.	does not go beyond the disclosure in the
the statement that the infe furnished	ormation recorded in computer readable form i	s identical to the written sequence listing has been
2. Certain claims were fou	nd unsearchable (See Box I).	
3. Unity of invention is lac		
		
4. With regard to the title,	·	
the text is approved as su	bmitted by the applicant.	,
X the text has been establis	hed by this Authority to read as follows:	
EXTERNAL COMBUSTION RO	TARY PISTON ENGINE	•
E Mith regard to the abotroct	•	
5. With regard to the abstract,	hmitted by the applicant	
	ornitted by the applicant. hed, according to Rule 38.2(b), by this Authori date of mailing of this international search rep	
6. The figure of the drawings to be publ	ished with the abstract is Figure No.	1
X as suggested by the appli	•	None of the figures.
because the applicant faile	ed to suggest a figure.	
=	characterizes the invention.	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/CA 03/02031

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
DE 2550360	Α	12-05-1977	DE	2550360	A1	12-05-1977
US 3724427	Α	03-04-1973	GB	1359930	Α	17-07-1974
US 3989011	Α	02-11-1976	JP	50102711	Α	14-08-1975
GB 1392190	Α	30-04-1975	NONE			
US 3782110	A	01-01-1974	JP JP	48046714 54019927		03-07-1973 19-07-1979
AT 311178	В	12-11-1973	NONE			
DE 2321639	Α	07-11-1974	DE	2321639	A1	07-11-1974
US 5032068	Α	16-07-1991	EG IL MX PL RU	18665 92017 172142 165391 2027862	A B B1	28-02-1994 15-11-1992 06-12-1993 30-12-1994 27-01-1995
US 2002014069	A1	07-02-2002	US US AT AT AU BR CA DE EP EP JP WO	6336317 2003106301 2003228237 263313 252685 5242599 9912651 2338347 69912288 1270899 1270900 1101024 2002521608 0006876	A1 T T A A1 D1 A1 A1 A1	08-01-2002 12-06-2003 11-12-2003 15-04-2004 15-11-2003 21-02-2000 02-05-2001 10-02-2000 27-11-2003 02-01-2003 02-01-2003 23-05-2001 16-07-2002 10-02-2000